

EARTH AND PLANETARY SCIENCE LETTERS

Volume 83, number 1/4, May 1987

CONTENTS

(Abstracted / indexed in: *Bulletin Signalétique, Chemical Abstracts, Current Contents, Mineralogical Abstracts and AGI's Bibliography and Index of Geology*)

Bolide impacts, acid rain, and biospheric traumas at the Cretaceous-Tertiary boundary R.G. Prinn and B. Fegley, Jr.	1
C/ ³ He in volatile fluxes from the solid Earth: implications for carbon geodynamics B. Marty and A. Jambon	16
Numerical models for diagenesis and the Neogene Sr isotopic evolution of seawater from DSDP Site 590B F.M. Richter and D.J. DePaolo	27
O, S, Sr, and Pb isotope variations in volcanic rocks from the Northern Mariana Islands: implications for crustal recycling in intra-oceanic arcs J.D. Woodhead, R.S. Harmon and D.G. Fraser	39
Two-phase separation and fracturing in mid-ocean ridge gabbros at temperatures greater than 700 °C D.S. Kelley and J.R. Delaney	53
Evolution of oceanic gabbros from DSDP Leg 82: influence of the fluid phase on metamorphic crystallizations C. Mével	67
Oxygen isotopes in coexisting garnets, clinopyroxenes and phlogopites of Roberts Victor eclogites: implications for petrogenesis and mantle metasomatism J.S. Ongley, A.R. Basu and T.K. Kyser	80
Evolution of continental crust in southern Africa N.B.W. Harris, C.J. Hawkesworth, P. Van Calsteren and F. McDermott	85
The cooling history of Silurian to Cretaceous alkaline ring complexes, south Eastern Desert, Egypt, as revealed by fission-track analysis G.I. Omar, B.P. Kohn, T.M. Lutz and H. Faul	94
Heat flow and depth versus age for the Mesozoic northwest Atlantic Ocean: results from the Sohm abyssal plain and implications for the Bermuda Rise K.E. Loudon, D.O. Wallace and R.C. Courtney	109
Surface deformation, gravity and the geoid from a three-dimensional convection model at low Rayleigh numbers C.H. Craig and D. McKenzie	123
Simple 2-D models for melt extraction at mid-ocean ridges and island arcs M. Spiegelman and D. McKenzie	137
Secular cooling of the Earth as a source of intraplate stress S.C. Solomon	153
Thrust sheet motion and earthquake mechanisms J.Cl. De Bremaecker	159
An equivalent layer magnetization model for Australia based on Magsat data M.A. Mayhew and B.D. Johnson	167
The relationship between seismic velocity and heat production—critical comments L. Rybach and G. Buntebarth	175
The relationship between seismic velocity and heat production—reply D.M. Fountain	178
Project Kaiko	181
Author Index Volume 83	377